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PARKHURST & WENDEL  
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ALEXANDRIA, VA 22314-2805

EXAMINER

MEHRPOUR, NAGHMEH

ART UNIT PAPER NUMBER

2686

DATE MAILED: 02/17/2004

13

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/423,356

Applicant(s)

Hideki et al.

Examiner

Naghmeh Mehrpour

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Oct 22, 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 11 6) ☐ Other:

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### Information Disclosure Statement

1. The information disclosure statement filed reference listed in the information Disclosure submitted on 10/22/03 have been considered by the examiner (see attached PTO-1449).

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1, 13**, are rejected under 35 U.S.C. 102(b) as being anticipated by Okubo (US Patent Number 5,689,355).

Regarding **Claim 1**, Okubo teaches a transmission apparatus comprising:

a master station 1 **for transmitting and receiving** a video or audio **transmission signal** audio by utilizing a first minute-power wave 5 (See figure 4, col 3 lines 61-67),  
the transmission signal **comprising slave station 4 address information and master station 1(base station) receiving frequency information indicating a frequency at which a master station 1 can receive a signal from a relay station 31 (master device/radio frequency stage) (see figure 4, col 1 lines 30-37);**

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a slave station 4 (mobile/slave) **for** transmitting and receiving a audio/video **transmission signal** a second minute power wave 5 (col 4 lines 59-67); and

a relay station 31, location between the master station 1 and slave station 4 the master 1 and slave station 4 (see figures 4), the master 1 (base station) and slave stations (4-n) located apart from each other by a distance longer than the reachable range of a first minute-power wave (col 4 lines 43-58);

said relay station 3 modulates (col 7 line 42) the return signal receives from the master station 1 and transmits the return signal 5 to the slave sation 4 (see figure 4, col 7 lines 35-41), thereby establishing a return transmission path between the relay station 3 and the master station 1, the relay station 3 is modulating the frequency of a first minutes power wave received from the master-station 1 to a different frequency as for transmitting the second signal (see figure 4, col 4 lines 54-61); and

the slave station 4 is for transmitting information of the relay station 3 receiving frequency at which the relay station 3 receives a signal from the slave station 4, the slave station 4 is recognizing that transmission signal that is a signal directed to the slave station 4, and the slave station 4 is modulating and transmitting a response audio/ video signal information and the relay station 3 frequency, thereby establishing a transmission path between the master station 1 and the slave station 4 (See figure 4, col 4 lines 59-67).

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Regarding **Claim 13**, Okubo teaches a transmission method for mutually transmitting audio transmission between a master station 1 and a slave station 4 by utilizing a minute power wave (transmission signal) (see figures 1, 4), comprising:

locating relay station 3 between the master station 1 and the slave station 4 which are located apart from each other by a distance longer than the reachable range of the minute power wave (see figure 1, col 4 lines 42-48); and

generating a transmission signal from the master station 1 (base station) comprising, in addition to original audio information, information indicating an address of the slave station 4 (col 4 lines 43-52), and information indicating a frequency at which the master station 1 receives a signal from the relay station 3 (see figure 4, col 4 lines 42-52);

modulating by the relay station 3 the frequency of the minute power wave received from the master station 1 to a different frequency 31 (radio frequency stage) and outputting the different frequency (col 1 lines 30-37, col 7 lines 1-21);

transmitting by the relay station 3 information about a frequency at which the relay station receives 3 a signal from the slave station 4 (see figure 4 col 4 lines 54-60); and

modulating by the modulation the minute power wave (signal) to the frequency specified by the relay station 3 and transmitting the video or audio (col 3 lines 61-67, col 4 lines 1-21); thereby establishing a transmission path between the master station 1 and the slave station 4,

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when the slave station 4 recognize that the transmission signal is a signal directed to the slave station 4 lines 3-15).

4. **Claims 3-5, 8-9, 12, 15-17, 20-21**, are rejected under 35 U.S.C. 102(b) as being anticipated by Hylton (US Patent Number 5,793,413).

Regarding **Claims 3, 15**, Hylton teaches a transmission apparatus comprising:

a transmitter having an RF converter (DAC) which generates a standard television signal (see figure 8, col 27 lines 18-30);

a receiver having an RF tuner 512 which receives the standard television signal (see figure 8, col 29 lines 1-7);

available frequency detection means for detecting frequencies which can be used for video transmission (col 29 line 14-21, frequency synthesizer detecting the frequency), within the reception band of the RF tuner, in advance of use (col 29 lines 5-16, predetermined broad frequency band is the band that is in the RF tuner, col 29 lines 55-56);

detected frequency registration means for registering the detected frequencies (frequency synthesizer detects frequency, col 35 lines 8-14, col 36 lines 49-52), as a communication frequency list (lists of channels in the channel map, col 35 lines 5-7), in both of the transmitter 1219 and the receiver 1216 (see figure 10, col 37 lines 65-67); and spread spectrum communication means for spreading the power spectrum by changing the frequency within the

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range of the communication frequency list (col 35 lines 4-14), and performing spread spectrum communication (col 35 lines 45-55, col 38 lines 25-40).

Regarding **Claims 4, 16**, Hylton teaches a transmission power control means for automatically changing the transmission power during the communication in accordance with the use frequency band width so as to keep the power density per unit bandwidth constant (col 30 lines 4-29). A transmitter having a power spectrum shaped, it provides the maximum power over the bandwidth of interest while maintaining the required power density

Regarding **Claims 5, 17**, Hylton teaches a transmission apparatus further comprising frequency changing mean; for changing the frequency during the communication, in synchronization with the synchronous timing of the video signal (col 29 lines 14-29, lines 45-64).

Regarding **Claims 8, 20**, Hylton teaches a transmission apparatus comprising: first and second transmission/reception apparatuses each comprising a transmission apparatus wherein frequency changing order control means for controlling the frequency changing order, during the communication (col 29 lines 45-67, col 30 lines 1-4 ), in such a manner that the frequency is changed in one direction, from the higher frequency to the lower frequency or from the lower frequency to the higher frequency, within the range of the communication frequency list, and when the frequency reaches the end of the frequency list, it is returned to the beginning of the frequency list (*a common type of carrier wave modulation used in SFH-CDMA systems is*

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*M*-ary frequency shift keying (MFSK), where  $k = \log_{\text{sub.2}} M$  data symbols are used to determine which one of the  $M$  frequencies is to be transmitted (col 29 lines 65-67, col 30 lines 1-3); and communication control means for controlling the first and second transmission/reception apparatuses to realize duplex communication (see figure 8, col 29 lines 18-52), by using a frequency time table in which the first and second transmission/reception apparatuses always use different frequencies (col 29 lines 53-64).

Regarding **Claims 9, 20-21**, Hylton inherently teaches a transmission apparatus further comprising communication frequency list update means which uses the previously registered communication frequency list when stating the communication, and uses a second communication frequency list obtained by duplicating the registered communication frequency list after the communication has been started, and updates the second communication frequency list as desired by exchanging the result of communication, i.e., whether it is good or bad, between the first and second transmission/reception apparatuses (col 29 lines 43-67, col 30 lines 1-5).

Hylton teaches method of spread communications by assignment of portions of broad frequency band (frequency list) to each particular channel. Communication between two communication units in a particular communication channel is accomplished by using a frequency synthesizer to generate a carrier wave in a particular portion of a predetermined broad frequency band for a brief period of time. The frequency synthesizer uses an input spreading code to determine the



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particular frequency from within the set of frequencies in the broad frequency band at which to generate the carrier wave. Spreading codes are input to the frequency synthesizer by a spreading code generator. The spreading code generator is periodically clocked or stepped through different transitions which causes different or shifted spreading codes to be output to the frequency synthesizer. Therefore, as the spreading code generator is periodically clocked, the carrier wave is frequency hopped or reassigned to different portions of the frequency band. In addition to hopping, the carrier wave is modulated by data symbols representing a sequence of data bits to be transmitted. A common type of carrier wave modulation used in SFH-CDMA systems is M-ary frequency shift keying (MFSK), where  $k = \log_2 M$  data symbols are used to determine which one of the M frequencies is to be transmitted. Multiple communication channels are allocated by using a plurality of spreading codes. As a result, transmitted signals are in the same broad frequency band of the communication channel, but within unique portions of the broad frequency band assigned by the unique spreading codes (col 29 lines 43-67, col 30 lines 1-5). In order to achieve method of CDMA communication systems, the system has to go through the frequency list (broad frequency band) by the M ( $k \log 2$ ) frequency interval, and each time it examine a frequency update the frequency list till it determine the transmit frequency.

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***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 2, 14**, are rejected under 35 U.S.C. 103(a) as being unpatentable over Okubo et al. (US Patent Number 5,719,619) and in view of Hattori et al (US Patent Number 5,719,619).

Regarding **Claims 2, 14**, Okubo fails teach a transmission apparatus as described further comprising control signal superposition and transmission means for transmitting a control signal by superposing it on the video signal in the blanking period, during the communication. However, Hattori teaches a method of transmitting a control signal by superposing it on the video signal in the blanking period, during the communication (col 28 lines 40-47). Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to combined Hattori system that superposing audio signals to a vertical blanking period of the video signal with Okubo wireless video system, in

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order to reduce the interference in a RF communication system with plurality of wireless video terminals.

7. **Claims 6-7, 19**, are rejected under 35 U.S.C. 103(a) as being unpatentable over Hylton et al. (US Patent Number 5,793,413) in view of Hattori et al. (US Patent Number 5,719,619).

Regarding **Claims 6-7, 19**, Hylton fails to teach a transmission apparatus comprising audio signal superposition and transmission means for subjecting an audio signal to PCM, and for transmitting the PCM audio signal by superposing the PCM audio signal on the video in the blanking period, during the communication. Hattori teaches a transmission apparatus comprising audio signal superposition and transmission means for subjecting an audio signal to PCM, and for transmitting the PCM audio signal by superposing the PCM audio signal on the video in the blanking period, during the communication (col 28 lines 50-60). Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to combine Hattori system that superposing audio signals to a vertical blanking period of the video signal with Hylton wireless video system, in order to broadcast information data of question data, selection data, evaluation data can be broadcast in a multiplexed condition by the FM teletext broadcast.

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8. **Claims 10, 22**, are rejected under 35 U.S.C. 103(a) as being unpatentable over Hylton et al. (US Patent Number 5,793,413) in view of Yoshinobu (US Patent Number 5,684,526).

Regarding **claims 10, 22**, Hylton fails to teach transmission apparatus comprising : ID storage means for storing an identification number which is given to the transmission apparatus during manufacture; and ID inquiry and registration means for performing mutual inquiry of IDs with another transmission apparatus which is permitted to have communication in advance of use, and registering the ID. However Yoshinobu teaches a television receive of which screen and speaker provide interface between a system for two way broadcast program and a user, and a remote control transmitter for selecting a response (col 5 lines 55-60), the response information includes a header for indicating a response command; identification (ID) information such as program ID information and an apparatus ID (an ID number of the response information transmitting apparatus, which may be a serial number of given at the manufacture of the apparatus (col 7 lines 5-12). The ID number assigned at manufacture) that the transmitting apparatus has as fixed data stored in the ROM (col 8 lines 12-23). Hylton and Yoshinobu's systems both operates in the same kind of environment. Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to combine Yoshinobu's

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teaching with Hylton, in order to prevent any other transmitter controller receives the signal from the broadcaster for the purpose of security.

9. **Claims 11-12, 23-24,** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hylton et al. (US Patent Number 5,793,413) in view of Yoshinobu (US Patent Number 5,684,526) in further view of Matsuda (US Patent Number 5,684,526).

Regarding **Claims 11, 23,** the combination of Hylton and Yoshinobu fails to teach that retransmission means for performing retransmission by using a frequency time table different from said frequency time table when a transmission signal from another apparatus which has requested communication cannot be detected even when a predetermined period of time has passed after starting the transmission mode, and communication signal from another terminal cannot be detected when a predetermined period has passed. However Matsuda teaches a retransmission means for performing retransmission by using a frequency time table different from said frequency time table when a transmission signal from another apparatus which has requested communication cannot be detected even when a predetermined period of time has passed after starting the transmission mode, and communication signal from another terminal cannot be detected when a predetermined period has passed. (col 7 lines 34-62). Matsuda mentioned that due to movement of the wireless video terminal from the zone 18 A the

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zone 18B, the wireless terminal can not receive a signal which is transmitted by the base station for Video data that controlling the zone 18A (col 10 lines 29-67). Since Hylton modified by Yoshinobu teaches a transmission apparatus wherein frequency setting means which always executes the reception mode in advance of the transmission mode to detect the frequency time tables of all other transmission apparatus which are performing transmission within the game wave area (Hylton, col 34 lines 33-39), and performs transmission by using a frequency time table the use frequency of which is always different from those of these other transmission apparatus (Hylton, col 33 lines 55-67, col 34 lines 1-2), and Matsuda teaches that requested communication from other terminals cannot be detected if the predetermined time is passed. Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to combine the above teaching of Matsuda with Hylton modified by Yoshinobu, in order to provide a wireless video system which performs with no interference.

Regarding **Claims 12, 24**, Hylton teaches a transmission apparatus further comprising output stop means for stopping output of the original information such as audio, when the ID which is permitted to have communication cannot be confirmed in the reception mode (col 35 lines 17-45).

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*Response to Arguments*

10. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

**Conclusion**

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. **Any responses to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

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(703) 872-9314, (for formal communications indented for entry)

**Or:**

(703) 308-6306, (for informal or draft communications, please label

“PROPOSED” or “DRAFT”)

Hand-delivered responses should be brought to Crystal Park II. 2121 Crystal Drive, Arlington. Va., sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Melody Mehrpour whose telephone number is (703) 308-7159. The examiner can normally be reached on Monday through Thursday (first week of bi-week) and Monday through Friday (second week of bi-week) from 6:30 a.m. to 5:00 p.m.

If attempt to reach the examiner are unsuccessful the examiner’s supervisor, Marsha Banks-Harold be reached (703)305-4379.



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NM

Jan 30, 2004

*Marsha D Banks-Harold*  
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